REMARKS

Claims 1-20 are pending in the present application. Claims 2, 5, 14, and 17 are canceled above. Claims 1 and 13 are amended above. No new matter is added by the claim amendments. Entry is respectfully requested.

Applicant notes, with appreciation, that the Office Action indicates at page 6 that claims 9-12 are allowed.

Applicant further notes that the Office Action indicates that claims 7-8 and 19-20 would be allowable if rewritten in independent form. Applicant wishes to defer submission of these claims pending consideration of the present Amendment.

Claims 1-5 and 13-17 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Kawabata, *et al.* (U.S. Patent No. 6,373,533 - hereinafter "Kawabata") in view of Hieda (U.S. Patent No. 5,818,521). Claims 6 and 18 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Kawabata in view of Hieda, and in further view of Kuo, *et al.* (U.S. Patent No. 5,982,929 - hereinafter "Kuo"). Reconsideration of the rejections, and allowance of the claims, are respectfully requested.

In the example provided in FIG. 1 of the present specification, a first analog-to-digital converter 107a converts an analog image signal into a plurality of sections (represented as SV1 - SVmax of FIG. 2). A gain selector 107b selects the corresponding gain according to each section and applies the corresponding gain to amplifier 107c. FIG. 2 illustrates the characteristics of the gain selector 107b. The amplifier 107c amplifies the analog image signal with the corresponding gain according to each section. FIG. 3 is a characterization of the output signal of the amplifier 107c.

A second analog-to-digital converter 109a converts the output of the amplifier 107c into a digital signal. A gamma corrector 109b non-linearly gamma corrects each section of the digital signal in consideration of the section-dependent gain of the analog image signal. That is, the gamma corrector 109b gamma corrects each section of the digital signal according to each of the plurality of sections on which the amplification of the analog image signal by the amplifier is based. FIG. 4 is a characterization of the output signal of the non-linear gamma corrector 109b.

Independent claim 1 is amended above to include the limitations of former claims 2 and 5, now canceled. Claim 1 now positively recites the "first analog-to-digital converter", the "gain selector" and the "amplifier" of the "first signal processing means", and also positively recites the "second analog-to-digital converter", and the "gamma corrector" of the "second signal processing means", among other limitations. Independent claim 13 is amended above to include the limitations of former claims 14 and 17, now canceled. Claim 13 now positively recites "converting the analog image signal into a first digital signal...", and selecting a corresponding gain among the plurality of different gains", among other limitations. It is submitted that the combination of Kawabata and Hieda fails to teach or suggest this combination of limitations.

In addition, applicant notes that the Office Action indicates at page 2 that:

> Applicant's claim language could be interpreted such that only one histogram is generated and both gain amplification and gamma correction are performed on the plurality of sections of that histogram. When in fact...the output of 109a is gamma-corrected according to each section of the histogram.

In view of this, for the purpose of clarification, independent claims 1 and 13 are further amended above to clearly state that <u>each section</u> of the plurality of sections is used for the non-linear gamma correction. In particular, independent claim 1 is amended above to state a "second signal processing means including a second analog-to-digital converter for converting the analog image signal amplified by the plurality of different gains into a second digital signal, and a

gamma corrector for non-linearly gamma-correcting the second digital signal according to each section of the plurality of sections on which the amplification of the analog image signal by the first signal processing means is based" (emphasis added), and claim 13 is amended above to state "converting the image signal amplified by the plurality of different gains into a second digital signal, and non-linearly gamma-correcting the second digital signal according to each section of the plurality of sections on which the amplification of the analog image signal is based" (emphasis added).

As stated in the Office Action at page 4, Kawabata fails to disclose a "second signal processing means for non-linearly gamma correcting a digital signal... ." Hieda is cited in the Office Action at page 4 as teaching the non-linear gamma correction of a "digital signal according to the plurality of sections... ." However, neither reference alone or in combination teaches or suggests "...non-linearly gamma-correcting the second digital signal according to each section of the plurality of sections on which the amplification of the analog image signal by the first signal processing means is based", as claimed in amended independent claim 1, and neither reference teaches or suggests "converting the image signal amplified by the plurality of different gains into a second digital signal, and non-linearly gamma-correcting the second digital signal according to each section of the plurality of sections on which the amplification of the analog image signal is based", as claimed in amended independent claim 13. Neither reference alone or in combination with the other teaches or suggests that the same sections that are used for amplification of the analog image signal are also used for non-linear gamma correction of the converted digital signal, as claimed in amended independent claims 1 and 13.

Accordingly, it is believed that independent claims 1 and 13 are allowable over the combined teachings of the cited references. Reconsideration of the rejections and allowance of independent claims 1 and 13 are respectfully requested. With regard to the various dependent claims, it follows that these claims should inherit the allowability of the independent claims from which they depend.

Closing Remarks

It is submitted that all claims are in condition for allowance, and such allowance is respectfully requested. If prosecution of the application can be expedited by a telephone conference, the Examiner is invited to call the undersigned at the number given below.

Respectfully submitted,

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